

SERVICE
MANUAL

PM65

4822 725 50852



MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound.

Only original MARANTZ parts can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS:

Parts can be ordered either by mail or by telex. In both cases, correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature: any order form or telex must be signed otherwise such part order will be considered as null and void.

PARTS ORDERING

Parts may be ordered at the following addresses:

AUSTRIA HORNYPHON Vertriebsgesellschaft GmbH Wienerbergstrasse 1 A 1101 Wien Austria Telex: 132.332	FINLAND MARANTZ DIVISION OF OY PHILIPS Ab Kaivokatu 8 00100 Helsinki Finland Telex: 124811	GREAT BRITAIN MARANTZ AUDIO U.K. Ltd Unit 15/16 Saxon Way Industrial Estate Moor Lane Harmondsworth UB7 OLW Great Britain Telex: 935196	SAUDI ARABIA AL ALAMIAH ELECTRONICS P.O.Box 5954 University Street Riyadh 11432 Saudi Arabia Telex: 401530	SWITZERLAND DYNAVOX ELECTRONICS Route de Villars 105 1701 Fribourg Switzerland Telex: 942377
BELGIUM SVD DIVISION MARANTZ Industrialaan 1 1720 Groot-Bijgaarden Belgium Telex: 24466	FRANCE MARANTZ FRANCE 4 Rue Bernard Palissy 92600 Asnières France Telex: 611651	GREECE SHERTON ELECTRONICS S.A. P.O.Box 21025 Hippocrates Street 188 Athens 11471 Greece Telex: 216.795	SOUTH AFRICA MARANTZ DIVISION OF PHILIPS S.A. Main Road Martindale P.O. Box. 58088 Newville 21114 South Africa	TURKEY DOGRUOL Ltd. I.M.C. 6 Blok N°6310 Unkapani Istanbul Turkey Telex: 22085
CHILE MARANTZ DIVISION OF PHILIPS S.A. AV. Santa Maria, 0760 Casilla 2687 Santiago Telex: 240.239	GERMANY MARANTZ GERMANY GmbH Max-Planck-Strasse 22 6072 Drieieich 1 Germany Telex: 529821	JAPAN MARANTZ JAPAN, Inc. 35-1, 7-chome, Sagamiono Sagamihara-shi, Kanagawa Japan	SPAIN PHONO S.A. Ignacio Iglesias 10 Badalona (Barcelona) Spain Telex: 59355	MALTA CACHIA & GALEA Republic Street, 68D Valetta Telex: 1682
DENMARK MARANTZ DIVISION OF PHILIPS SERVICE A/S Prags Boulevard 80 Postbox 1919 DK-2300 København S Denmark Telex: 31201	THE NETHERLANDS Elpro Marantz Wint Hontlaan 28 3526 KV Utrecht The Netherlands Telex: 4748	KUWAIT AL ALAMIAH ELECTRONICS Ussama Building Fahd al Saleem Street P.O.Box 23781 Safat-Kuwait Telex: 22694	SWEDEN MARANTZ DIVISION OF PHILIPS Försäjning AB Tegeluddsvägen 1 S-115 84 Stockholm Sweden Telex: 14060	PORTUGAL MARANTZ Divisao philips S.A. service Outurela-carnaxide 2795 LinDA-A-VELHA Telex: 43906
NORWAY MARANTZ DIVISION OF PHILIPS A/S Sandstuveien 40 0680 Oslo 6 Norway Telex: 72640	ITALY MARANTZ ITALIANA S.P.A. Via Chiese, 74 20126 Milano			

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

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How to use this service manual

- The "Common parts" which Marantz Japan, Inc. has established are eliminated from this service manual.
- These "Common parts" are applied to all models in the service manuals arranged and issued by MJI.
- To indicate clearly the common parts in the schematic diagram, a line is drawn above or under the Ref. Desig. No. of applicable parts.
- "Common parts" can be supplied from the Marantz service center as ever.
In case of ordering, please establish the parts number of 12 N/C'S following the procedure mentioned in this service manual "How to establish the parts number for common parts".

- 1) Please correctly write the parts number of 12 N/C'S following the rule.

MODEL PM-65AV STEREO AMPLIFIER



1. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model PM-65AV consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Tone Amp mounted on P.W. Board PE01
2. Master Volume mounted on P.W. Board PG01
3. Tape VCR Monitor mounted on P.W. Board PJ01
4. Video Buffer Amp mounted on P.W. Board PL01
5. Front Switch mounted on P.W. Board PS01
6. TV Remote out
Jack mounted on P.W. Board PT01
7. Input Selector,
Phono mounted on P.W. Board PV01
8. Headphone,
Speaker Switch mounted on P.W. Board PW01
9. Input Selector
Indicator mounted on P.W. Board PY01
10. Function LED
Indicator mounted on P.W. Board PY51
11. Main Amp mounted on P.W. Board P701
12. Power Supply mounted on P.W. Board P801
13. Power Switch mounted on P.W. Board P901

2. MAIN AMP ADJUSTMENT PROCEDURE

1. Test Points

Left channel: J705 (+), J707 (-)
Right channel: J706 (+), J708 (-)

2. Adjustment Points

Left channel: R719 2.2k ohm variable resistor
Right channel: R720 2.2k ohm variable resistor

3. Adjustment Procedure

- (1) Before turning on the set's power, turn variable resistors R719 and R720 in the direction in which the current does not flow (clockwise for R719, counterclockwise for R720).
- (2) Connect the DC digital voltmeter to the test points with the proper polarities. (Adjust both channels at once.)
- (3) Set the set's volume to minimum, the speaker terminals to no load, and the input to open.
- (4) Set the following after turning on the power:
After 30 seconds: 8 to 9 mV (22 to 25 mA)
After 1 minute: 9 to 10 mV (25 to 27 mA)
Be sure to set for 9 to 10 mV (25 to 27 mA) when the circuitry becomes stable.

4. Notes

When readjusting sets which have been heated up for repairs, etc., conduct a heat run at an idle for about 10 minutes, then set for 9 to 10 mV (25 to 27 mA).

3. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model PM-65AV Stereo Amplifier.

Item	Use
Distortion Analyzer	Distortion measurements
Audio Oscillator	Sinewave and squarewave signal source
ACVTVM	Voltage measurements (AC)
Oscilloscope	Waveform analysis and trouble shooting and ASO alignment
Circuit Tester	Trouble shooting
DCVTVM	Voltage measurements (DC)
AC Wattmeter	Monitors primary power to amplifier
Line Voltmeter	Monitors potential of primary power to amplifier
Variable Autotransformer	Adjust level of primary power to amplifier
Shorting Plug	Shorts amplifier input to eliminate noise pickup

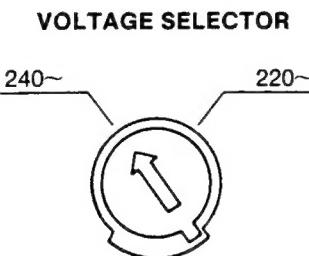
4. VOLTAGE CONVERSION

• EUROPEAN MODEL ONLY

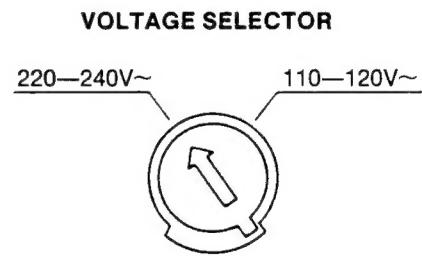
To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

CAUTION
DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

Voltage Conversion Chart



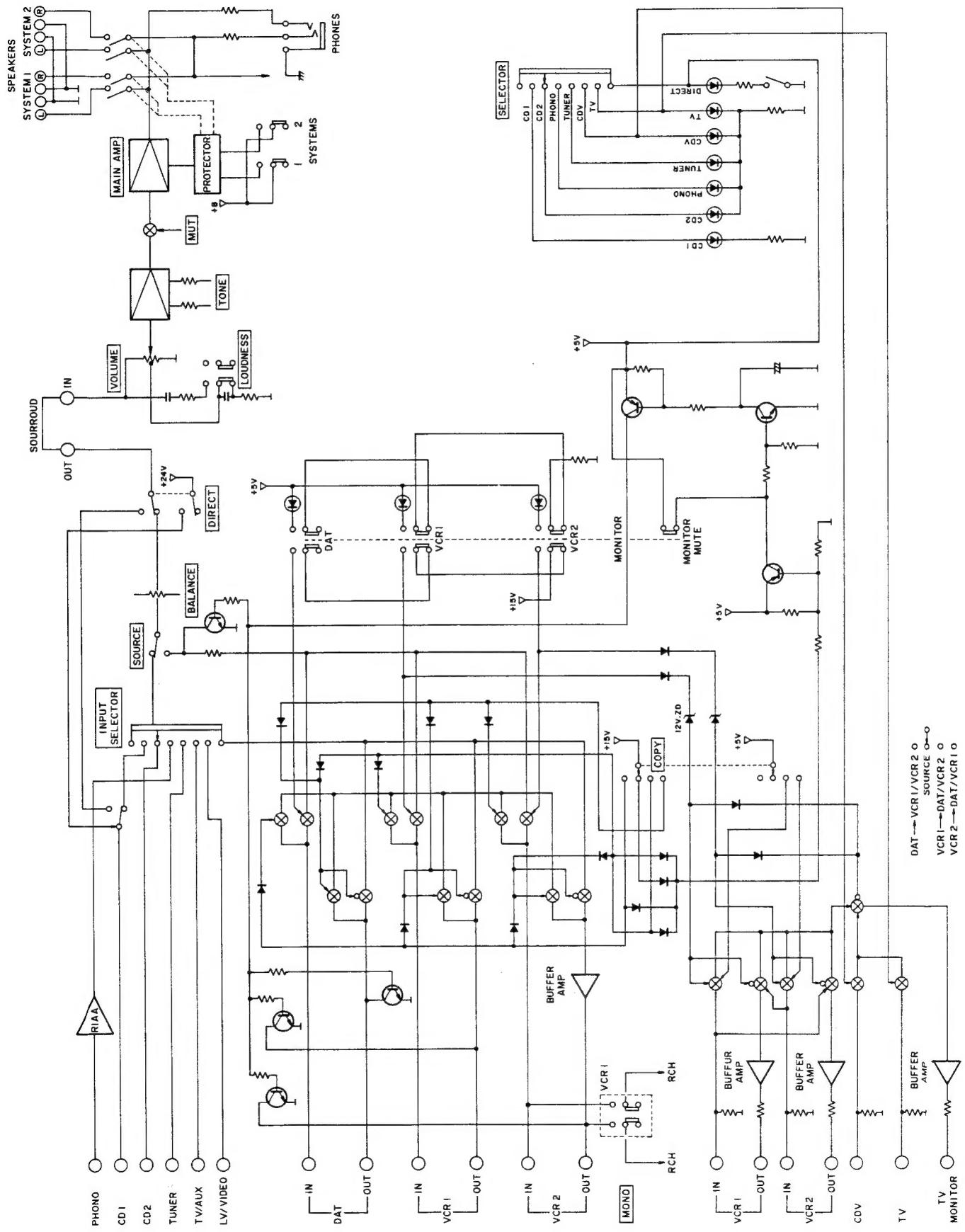
(N, W, A) Versions



(E) Version

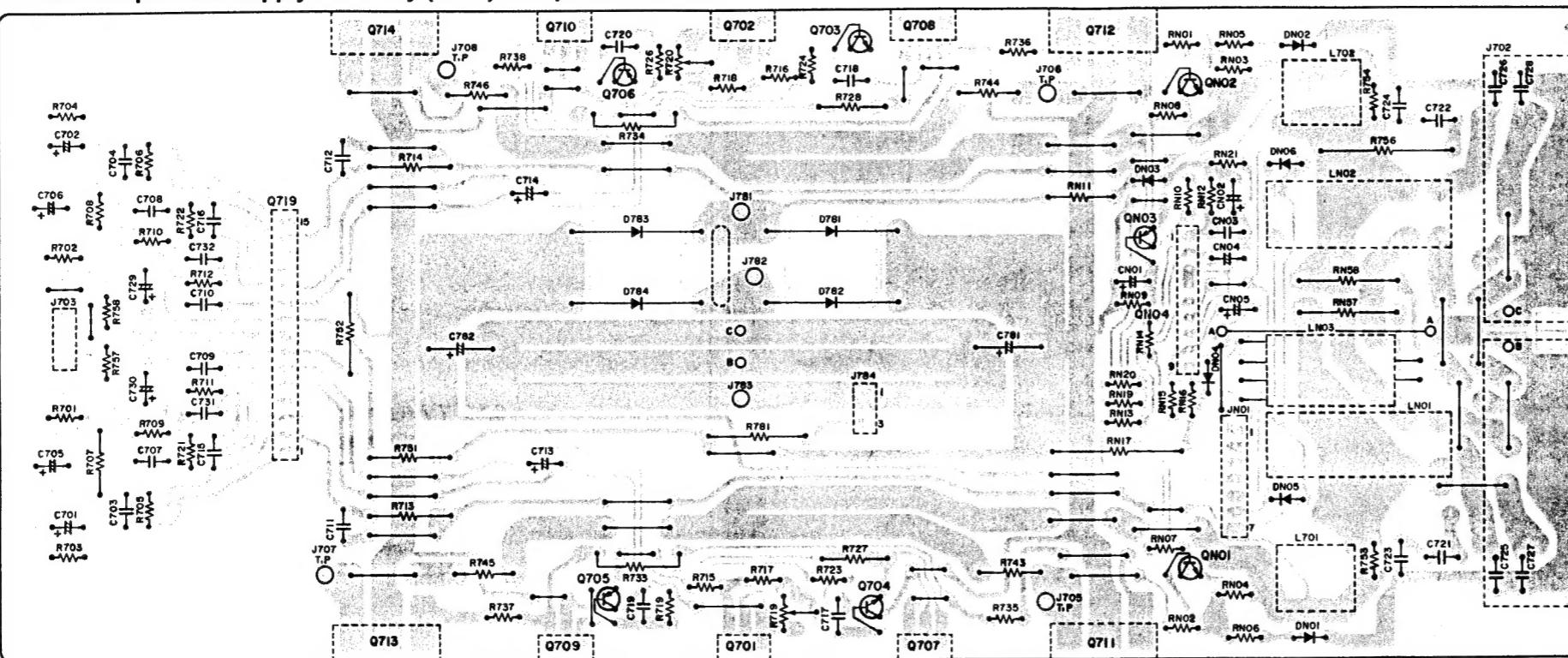
Note on Safety: Symbol Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

5. BLOCK DIAGRAM

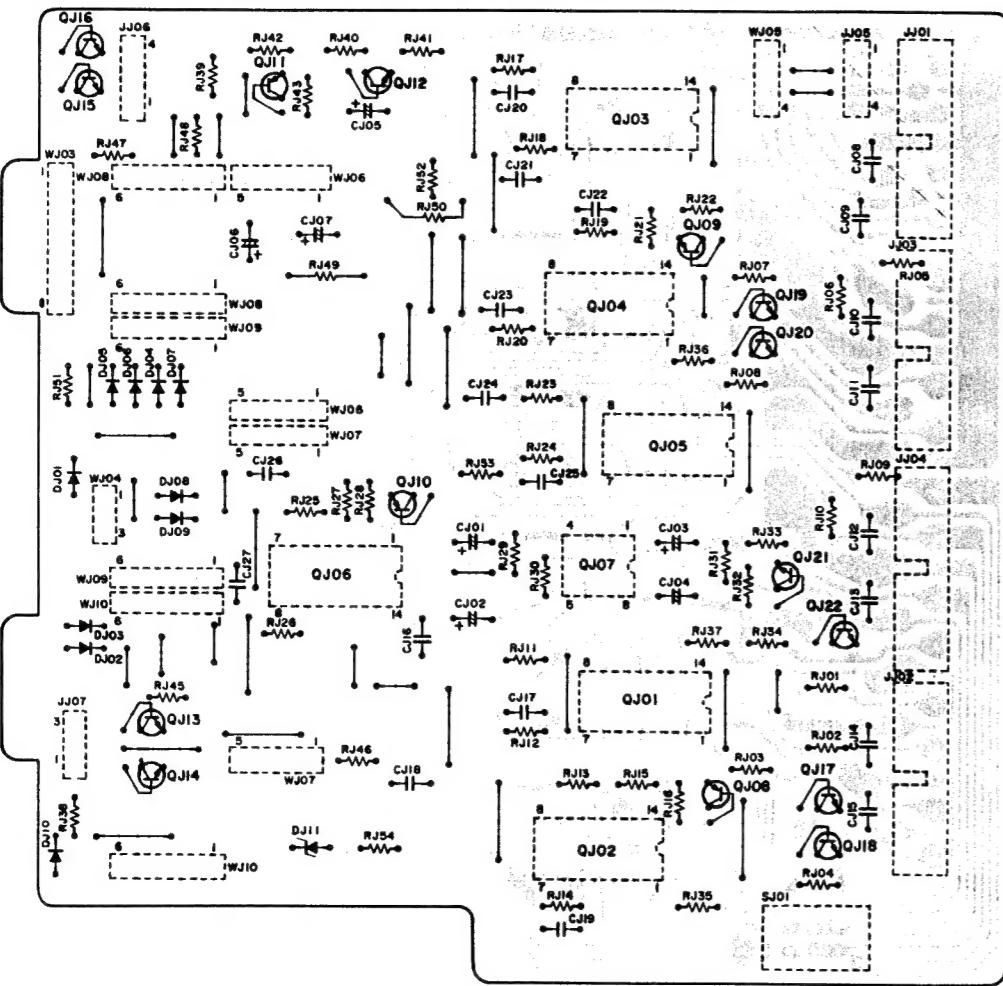


6. PARTS LOCATIONS (Pattern Side)

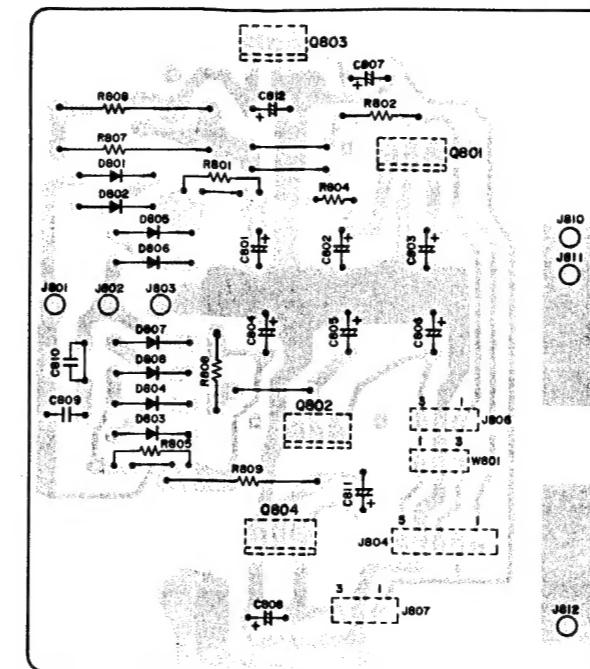
6.1 Main Amp/Power Supply Assembly (P701) Component Locations



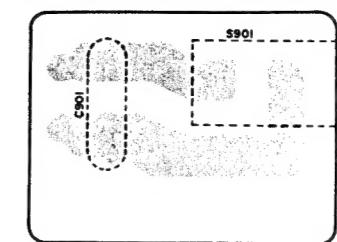
6.7 Tape VCR Monitor Assembly (PJ01) Component Locations



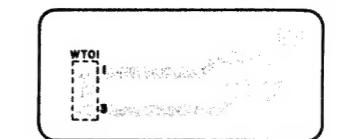
6.9 Power Supply Assembly (P801) Component Locations



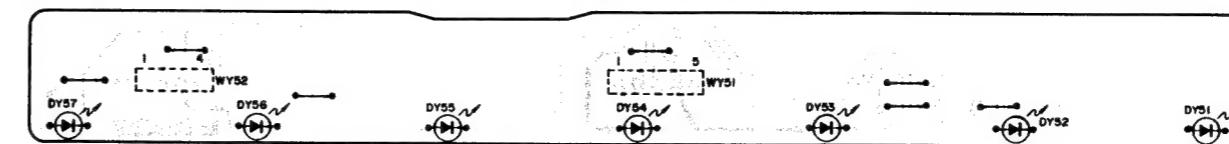
6.10 Power Switch Assembly (P901) Component Locations



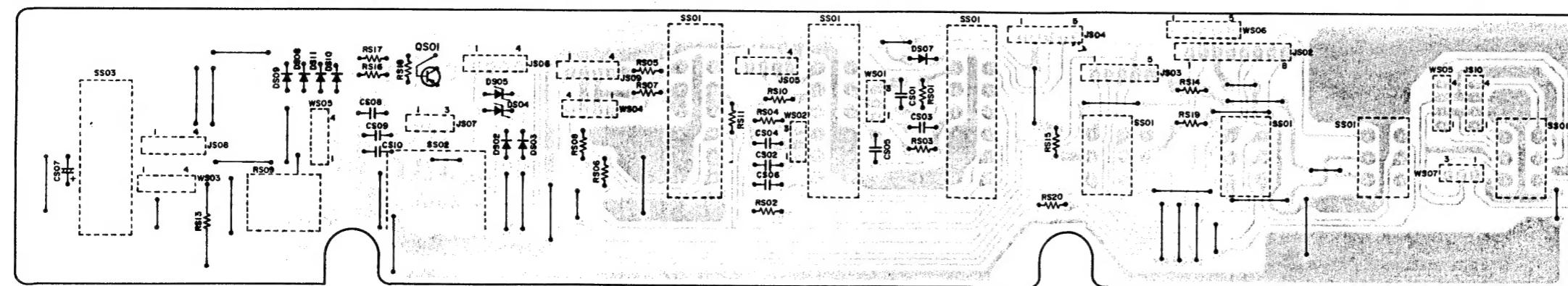
6.11 TV Remocon Out Jack Assembly (PT01) Component Locations



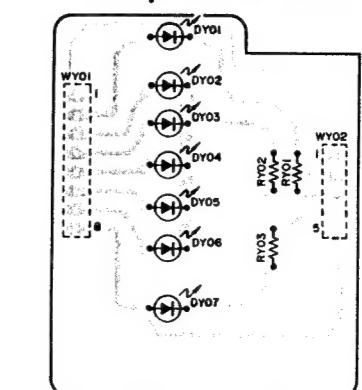
6.12 Function LED Indicator Assembly (PY51) Component Locations



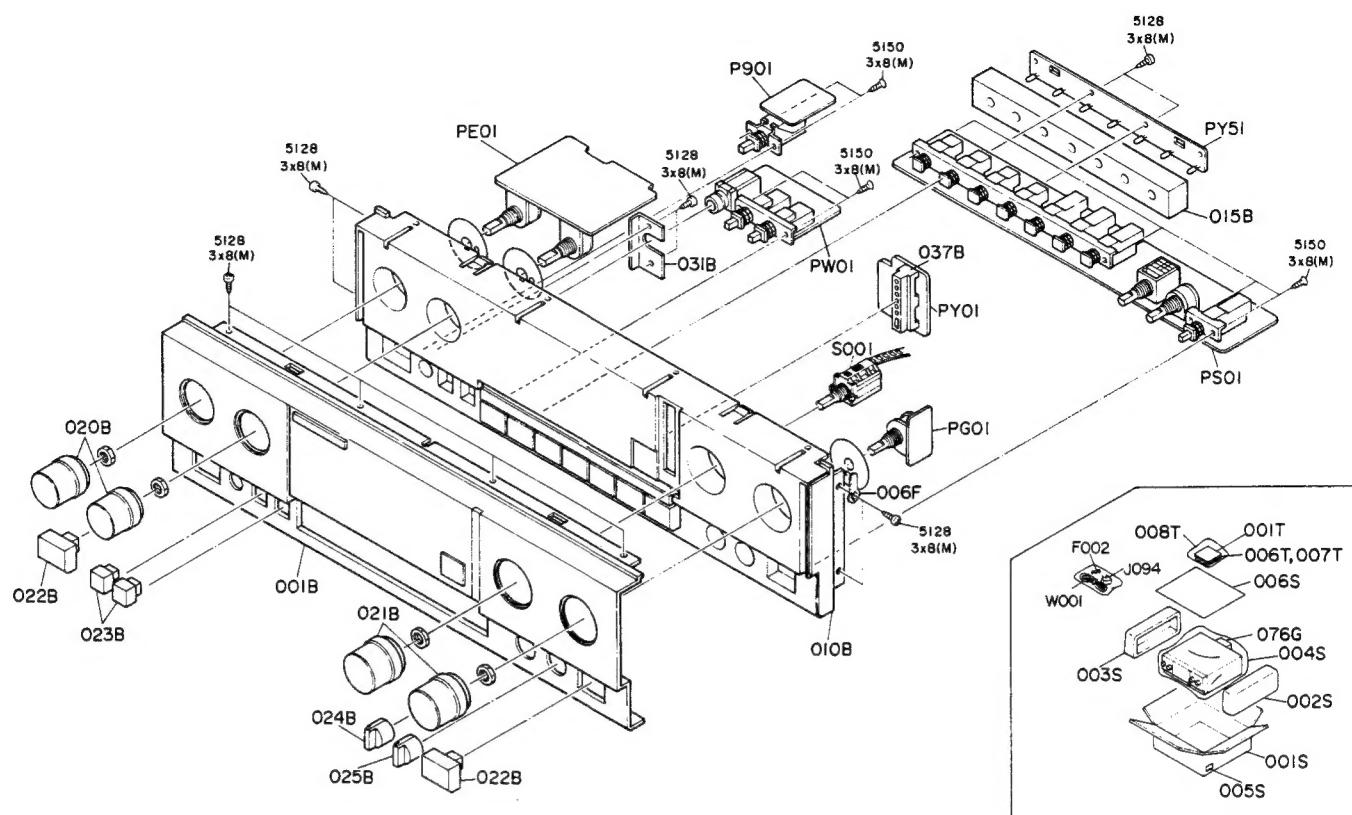
6.8 Front Switch Assembly (PS01) Component Locations



6.13 Input Selector Indicator Assembly (PY01) Component Locations

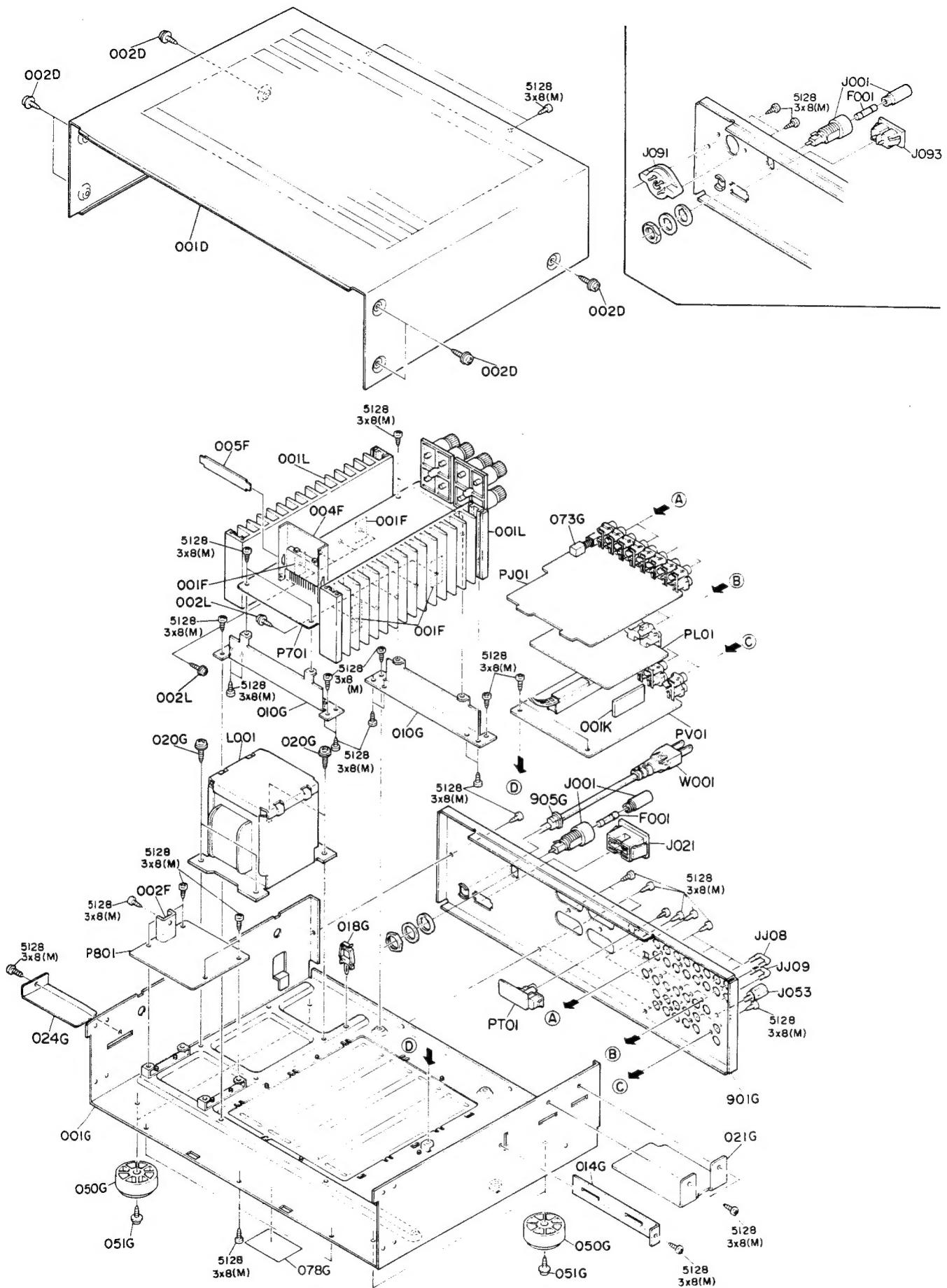


7. EXPLODED VIEW AND PARTS LIST



REF. DESIG.	PART NO.	DESCRIPTION
001B	4822 426 51286	Front Panel Assembly
010B	4822 426 51287	Front Panel Assembly, Chassis
015B	4822 459 40633	Mask
020B	4822 412 20984	Knob, Tone Control
021B	4822 412 20983	Knob, Volume/Selector
022B	4822 410 24635	Button, Power/Direct
023B	4822 410 24636	Button, Speaker
024B	4822 410 26468	Knob, Rec Selector
025B	4822 412 20157	Knob, Balance
031B	4822 256 91306	Retainer, Headphone
037B	4822 380 20311	Reflector, LED
006F	4822 290 30266	Lug, Volume Earth
S001	4822 273 10171	Rotary Switch

REF. DESIG.	PART NO.	DESCRIPTION		
		PACKING		
001T	4822 736 13909	User Manual		
008T	4822 600 70363	Polyethylene Bag		
076G	4822 530 20609	Sleeve AC Cord [E]		
△ F002	4822 253 30027	Fuse	T3.15A "J"	250V [E]
△ J094	4822 265 10092	Jack, AC Adapter [E]		
△ W001	4822 321 10418 4822 321 21123	A.C. Power Cord [A]		
		A.C. Power Cord [N, W]		



REF. DESIG.	PART NO.	DESCRIPTION		
001D	4822 426 60548	Lid, Top Cover		
002D	4822 501 11008	B.T. Screw	B4 x 8	
001F	4822 466 92249	Insulator (Q711~Q714)		
002F	4822 255 40764	Heatsink (Q803)		
004F	4822 255 40867	Heatsink (Q719)		
005F	4822 492 63973	Spring		
018G	4822 459 80343	Clamper, Wire		
020G	4822 501 11008	B.T. Screw	B4 x 8	
050G	4822 462 71481	Leg		
051G	4822 501 11008	B.T. Screw	B4 x 8	
073G	4822 412 20506	Knob, Mono/Stereo		
078G	4822 600 70229	Label, Caution		
901G	4822 426 20167	Rear Panel [E]		
905G	4822 532 51704	Bushing, AC Power Cord [E]		
001K	4822 454 12142	Shield		
002L	4822 502 12512	B.T. Screw	B3 x 12	
△F001	4822 253 30191	Fuse	T1.6A	250V
△J001	4822 256 30233	Jack, Fuse Holder		
△J021	4822 267 40663	Jack, AC Outlet [E]		
J053	4822 290 40297	Terminal, GND		
JJ08	4822 264 10111	Shote Plug, Surround		
JJ09	4822 264 10111	Shote Plug, Surround		
△L001	4822 130 61184	Power Transformer [E]		
△W001	4822 321 10427	A.C. Power Cord [E]		
△J091	4822 272 10227	Voltage Selector [E]		
△J093	4822 272 10236	Voltage Selector [N, A, W]		
	4822 265 20222	Plug, AC Inlet [N, A, W]		

8. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTOR

R***: (1) GD05 --- 140, Carbon film fixed resistor, $\pm 5\%$, 1/4W
R***: (2) GD05 --- 160, Carbon film fixed resistor, $\pm 5\%$, 1/6W

① — Resistance value

Examples

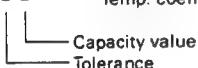
①

Resistance value
 0.1Ω...001 10Ω...100 1kΩ...102 100kΩ...104
 0.5Ω...005 18Ω...180 2.7kΩ...272 680kΩ...684
 1Ω...010 100Ω...101 10kΩ...103 1MkΩ...105
 6.8Ω...068 390Ω...391 22kΩ...223 4.7MkΩ...475

(Note) Please distinguish 1/4W from 1/6W by the shape of parts used actually.

C***: CERAMIC CAP.

(1) DD1 --- 370, Ceramic condenser
 ① ② Disc type
 Temp. coeff. P350 ~ N1000, 50V



Capacity value
 Tolerance

Examples

①

Tolerance (Capacity deviation)
 $\pm 0.25\text{pF} \dots 0$
 $\pm 0.5\text{pF} \dots 1$
 $\pm 5\% \dots 5$

* Tolerance of COMMON PARTS handled here are as follows:

0.5pF ~ 5pF $\pm 0.25\text{pF}$
 6pF ~ 10pF $\pm 0.5\text{pF}$
 12pF ~ 560pF $\pm 5\%$
 ② Capacity value
 0.5pF...005 3pF...030 100pF...101
 1pF...010 10pF...100 220pF...221
 1.5pF...015 47pF...470 560pF...561

C***: CERAMIC CAP.

(1) DK16 --- 300, High dielectric constant ceramic condenser
 ① Disc type
 ② Temp. chara. 2B4, 50V



Capacity value

Example

②

Capacity value
 100pF...101 1000pF...102 10000pF...103
 470pF...471 2200pF...222

C***: ELECTROLY CAP. ($\frac{1}{2}$), FILM CAP. ($\frac{1}{2}$)

(1) EA --- 10, Electrolytic condenser
 ① ② One-way lead type, Tolerance $\pm 20\%$



Dielectric strength

Capacity value

Examples

①

Capacity value
 0.1μF...104 4.7μF...475 100μF...107
 0.33μF...334 10μF...106 330μF...337
 1μF...105 22μF...226 1100μF...108
 2200μF...228

② Working voltage

6.3V...006 25V...025
 10V...010 35V...035
 16V...016 50V...050

(2) DF15 --- 350, Plastic film condenser
 ① One-way type, Mylar $\pm 5\%$ 50V



Capacity value

Examples

①

Capacity value
 0.001μF (1000pF)...102 0.1μF...104
 0.0018μF182 0.56μF...564
 0.01μF.....103 1μF...105
 0.015μF.....153

REF. DESIG.	PART NO.	DESCRIPTION
		PE01-TONE AMP CIRCUIT BOARD
		PE01-CAPACITORS
CE01	4822 121 42758	Film 1800pF $\pm 5\%$
CE02	4822 121 42758	Film 1800pF $\pm 5\%$
CE03	4822 121 43135	Film 39pF $\pm 5\%$
CE04	4822 121 43135	Film 39pF $\pm 5\%$
CE05	4822 121 42757	Film 0.015μF $\pm 5\%$
CE06	4822 121 42757	Film 0.015μF $\pm 5\%$
CE09	4822 121 42764	Film 0.047μF $\pm 5\%$
CE10	4822 121 42764	Film 0.047μF $\pm 5\%$
CE13	4822 124 41539	Elect 47μF 16V
CE14	4822 124 41539	Elect 47μF 16V
CE15	4822 124 90358	Elect 22μF 16V
CE16	4822 124 90358	Elect 22μF 16V
CE17	4822 121 42762	Film 3300pF $\pm 5\%$
CE18	4822 121 42762	Film 3300pF $\pm 5\%$
CE19	4822 124 90365	Elect 220μF 25V
CE20	4822 124 90365	Elect 220μF 25V
		PE01-RESISTORS
RE31	4822 100 20687	10KΩ(C), Variable; Treble
RE32	4822 100 20687	10KΩ(C), Variable; Bass
△RE33	4822 113 90119	22Ω $\pm 2\%$ 1/4W, Fuse
△RE34	4822 113 90119	22Ω $\pm 2\%$ 1/4W, Fuse
		PE01-SEMICONDUCTORS
QE01	4822 130 42839	F.E.T. 2SK369(BL)
QE02	4822 130 42839	F.E.T. 2SK369(BL)
QE03	4822 130 42839	F.E.T. 2SK369(BL)
QE04	4822 130 42839	F.E.T. 2SK369(BL)
QE05	4822 209 81565	IC NJM2041D-D
QE07	4822 130 43818	Transistor 2SC2878(A)
QE08	4822 130 43818	Transistor 2SC2878(A)
		PE01-MISCELLANEOUS
WE03	4822 323 10074	Jumper Lead, 3P
		PG01-MASTOR VOLUME CIRCUIT BOARD
RG01	4822 100 20685	Variable Resistor 50KΩ
JG01	4822 265 30482	Plug, 4P
JG02	4822 265 10063	Jack, 6P
		PJ01-TAPE/VCR MONITOR CIRCUIT BOARD
		PJ01-CAPACITORS
CJ01	4822 124 22274	Elect 4.7μF 50V
CJ02	4822 124 22274	Elect 4.7μF 50V
CJ03	4822 124 41534	Elect 10μF 25V
CJ04	4822 124 41534	Elect 10μF 25V
CJ05	4822 124 41543	Elect 1μF 50V
CJ06	4822 124 41535	Elect 100μF 25V
CJ07	4822 124 41535	Elect 100μF 25V
CJ08	4822 122 32486	Ceramic 0.01μF +80% -20%
CJ15		

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
RJ49	4822 113 90119	PJ01-RESISTORS 22Ω ±2% 1/4W, Fuse [N, E, W]	QL01	4822 209 81801	IC LC4066B-H
RJ50	4822 113 90119	22Ω ±2% 1/4W, Fuse [N, E, W]	QL02	4822 209 81801	IC LC4066B-H
DJ01	4822 130 33305	PJ01-SEMICONDUCTORS Diode 1SS133, etc.	QL03	4822 209 81801	IC LC4066B-H
DJ10	4822 130 80322	Zener RD15JB3	QL04	4822 130 42591	Transistor 2SA1175(FF, EF)
DJ11	4822 130 80322		QL05	4822 130 42591	Transistor 2SA1175(FF, EF)
QJ01	4822 209 83804	IC LC4966	QL06	4822 130 42591	Transistor 2SA1175(FF, EF)
QJ06	4822 209 83631	IC NJM4558D-D	QL07	4822 130 42052	Transistor 2SC2785(FF, EF)
QJ08	4822 130 42591	Transistor 2SA1175(FF, EF)	QL15		
QJ11	4822 130 42052	Transistor 2SC2785(FF, EF)	JL01	4822 267 20352	PL01-MISCELLANEOUS Terminal, 4P; RCA
QJ12	4822 130 42052		JL02	4822 267 20351	Terminal, 3P; RCA
QJ15	4822 130 43818	Transistor 2SC2878(A)	JL03	4822 265 10171	Jack, 2P
QJ22			WL01	4822 323 10162	Jumper Lead, 2P
JJ01	4822 266 30284	PJ01-MISCELLANEOUS Terminal, 4P; Surround IN/OUT	WL02	4822 323 10143	Jumper Lead, 4P
JJ02	4822 267 20353	Terminal, 4P; DAT IN/OUT	WL03	4822 323 10225	Jumper Lead, 3P
JJ03	4822 267 20353	Terminal, 4P; VCR1 IN/OUT			
JJ04	4822 267 20353	Terminal, 4P; VCR2 IN/OUT			
JJ05	4822 265 30482	Plug, 4P			
JJ06	4822 265 10105	Jack, 4P			
JJ07	4822 265 10062	Jack, 3P			
JJ08	4822 264 10111	Shote Plug, Surround IN/OUT			
JJ09	4822 264 10111	Shote Plug, Surround IN/OUT			
SJ01	4822 276 12427	Push Switch, Mono/Stereo			
WJ03	4822 323 10233	Jumper Lead, 8P			
WJ04	4822 323 10079	Jumper Lead, 3P			
WJ06	4822 323 10053	Jumper Lead, 5P			
WJ07	4822 323 10053	Jumper Lead, 5P			
WJ08	4822 323 10169	Jumper Lead, 6P			
WJ09	4822 323 10169	Jumper Lead, 6P			
WJ10	4822 323 10169	Jumper Lead, 6P			
		PL01-VIDEO BUFFER AMP CIRCUIT BOARD	RS09	4822 100 20682	PS01-CAPACITORS 100KΩ(MN), Variable; Balance
			RS13	4822 116 60331	1KΩ ±5% 1W
CL01	4822 124 90353	PL01-CAPACITORS Elect 100μF 10V	DS02	4822 130 33305	PS01-SEMICONDUCTORS Diode 1SS133, etc.
CL03	4822 124 41544	Elect 470μF 6.3V	DS03	4822 130 33305	Diode 1SS133, etc.
CL04	4822 124 90353	Elect 100μF 10V	DS04	4822 130 80091	Zener 12V
CL06	4822 124 41544	Elect 470μF 6.3V	DS05	4822 130 80091	Zener 12V
CL07	4822 124 90353	Elect 100μF 10V	DS07	4822 130 33305	Diode 1SS133, etc.
CL09	4822 124 41544	Elect 470μF 6.3V	DS11		
CL10	4822 124 41537	Elect 220μF 6.3V	QS01	4822 130 42591	Transistor 2SA1175(FF, EF)
CL11	4822 124 41537	Elect 220μF 6.3V	JS02	4822 265 10059	PS01-MISCELLANEOUS Jack, 8P
DL01	4822 130 33305	PL01-SEMICONDUCTORS Diode 1SS133, etc.	JS03	4822 265 10061	Jack, 5P
DL02	4822 130 33305	Diode 1SS133, etc.	JS04	4822 265 10061	Jack, 5P
			JS05	4822 265 10105	Jack, 4P
			JS06	4822 265 10105	Jack, 4P
			JS07	4822 265 10062	Jack, 3P
			JS08	4822 265 10181	Jack, 4P
			JS09	4822 265 10105	Jack, 4P
			JS10	4822 265 30482	Plug, 4P
			SS01	4822 276 12341	Push Switch, Monitor/AV/Mute
			SS02	4822 278 10172	Rotary Switch, Tape Copy
			SS03	4822 276 12429	Push Switch, CD Direct
			WS01	4822 323 10079	Jumper Lead, 3P
			WS02	4822 323 10079	Jumper Lead, 3P
			WS06	4822 323 10094	Jumper Lead, 5P
			WS07	4822 323 10281	Jumper Lead, 3P

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
		PT01-TV REMOCON CIRCUIT BOARD	SV01	4822 277 20832	Slide Switch
JT01	4822 267 20349	Terminal, 1P; RCA	WV01	4822 323 10106	Jumper Lead, 3P
WT01	4822 323 10079	Jumper Lead	WV02	4822 323 10076	Jumper Lead, 3P
		PV01-INPUT SELECTOR/PHONO CIRCUIT BOARD	WV03	4822 323 10133	Jumper Lead, 4P
		PV01-CAPACITORS	WV05	4822 323 10143	Jumper Lead, 4P
C401	4822 121 51037	Film 150pF $\pm 5\%$	RW01	4822 116 60331	Resistor 1K Ω $\pm 5\%$ 1W
C402	4822 121 51037	Film 150pF $\pm 5\%$	RW02	4822 116 60331	Resistor 1K Ω $\pm 5\%$ 1W
C403	4822 121 41518	Film 470pF $\pm 5\%$	JW01	4822 267 30617	Jack, Headphone
C404	4822 121 41518	Film 470pF $\pm 5\%$	SW01	4822 276 12428	Push Switch, Speaker
C405	4822 124 41539	Elect 47 μ F 16V			PY01-INPUT SELECTOR IND. CIRCUIT BOARD
C406	4822 124 41539	Elect 47 μ F 16V	DY01	4822 130 80326	L.E.D. LT3D8B
C407	4822 121 42764	Film 0.047 μ F $\pm 5\%$	DY06	4822 130 80327	L.E.D. LT3G8B
C408	4822 121 42764	Film 0.047 μ F $\pm 5\%$	DY07	4822 130 80327	L.E.D. LT3G8B
C409	4822 121 42755	Film 0.012 μ F $\pm 5\%$	WY01	4822 323 10062	Jumper Lead, 8P
C410	4822 121 42755	Film 0.012 μ F $\pm 5\%$	WY02	4822 323 10094	Jumper Lead, 5P
C411	4822 121 42758	Film 1800pF $\pm 5\%$			PY51-FUNCTION LED IND. CIRCUIT BOARD
C412	4822 121 42758	Film 1800pF $\pm 5\%$	DY51	4822 130 80326	L.E.D. LT3D8B
C413	4822 124 90358	Elect 22 μ F 16V	DY57	4822 130 80326	L.E.D. LT3D8B
C414	4822 124 90358	Elect 22 μ F 16V			P701-MAIN AMP CIRCUIT BOARD
C415	4822 121 42763	Film 3900pF $\pm 5\%$	WY51	4822 323 10054	Jumper Lead, 5P
C416	4822 121 42763	Film 3900pF $\pm 5\%$	WY52	4822 323 10109	Jumper Lead, 4P
C417	4822 124 90365	Elect 220 μ F 25V			P701-CAPACITORS
C418	4822 124 90365	Elect 220 μ F 25V	CN01	4822 124 41543	Elect 1 μ F 50V
C419	4822 122 32486	Ceramic 0.01 μ F +80% -20%	CN02	4822 124 22273	Elect 0.47 μ F 50V
C420	4822 122 32486	Ceramic 0.01 μ F +80% -20%	CN04	4822 124 22275	Elect 47 μ F 10V
CV01	4822 122 32486	Ceramic 0.01 μ F +80% -20%	CN05	4822 124 22275	Elect 47 μ F 10V
CV10					
		PV01-RESISTORS	C701	4822 124 22571	Elect 10 μ F 50V [N, E, A]
R405	4822 116 53691	4.64K Ω $\pm 1\%$ 1/6W		4822 124 90386	Elect 10 μ F 25V [W]
R406	4822 116 53691	4.64K Ω $\pm 1\%$ 1/6W	C702	4822 124 22571	Elect 10 μ F 50V [N, E, A]
R407	4822 116 53691	4.64K Ω $\pm 1\%$ 1/6W		4822 124 90386	Elect 10 μ F 25V [W]
R408	4822 116 53691	4.64K Ω $\pm 1\%$ 1/6W	C703	4822 121 51036	Film 100pF $\pm 5\%$ [N, E, A]
R411	4822 116 53691	4.64K Ω $\pm 1\%$ 1/6W		4822 121 51008	Film 100pF $\pm 5\%$ [W]
R412	4822 116 53691	4.64K Ω $\pm 1\%$ 1/6W	C704	4822 121 51036	Film 100pF $\pm 5\%$ [N, E, A]
± R423	4822 113 90119	22 Ω $\pm 2\%$ 1/4W, Fuse [N, E, W]		4822 121 51008	Film 100pF $\pm 5\%$ [W]
± R424	4822 113 90119	22 Ω $\pm 2\%$ 1/4W, Fuse [N, E, W]	C705	4822 124 90354	Elect 100 μ F 16V
		PV01-SEMICONDUCTORS	C706	4822 124 90354	Elect 100 μ F 16V
DV01	4822 130 33305	Diode 1SS133, etc.			
Q401	4822 130 42839	F.E.T. 2SK369(BL)	C707	4822 121 42756	Film 1500pF $\pm 5\%$
Q402	4822 130 42839	F.E.T. 2SK369(BL)		4822 121 42756	Film 1500pF $\pm 5\%$
Q403	4822 130 42839	F.E.T. 2SK369(BL)	C708	4822 121 42756	
Q404	4822 130 42839	F.E.T. 2SK369(BL)	C713	4822 124 90354	Elect 100 μ F 16V
Q405	4822 209 81565	IC NJM2041D-D	C714	4822 124 90354	Elect 100 μ F 16V
		PV01-MISCELLANEOUS	C715	4822 121 43129	Film 15pF $\pm 10\%$ [N, E, A]
JV01	4822 267 20348	Terminal, 4P; CD1/CD2			
JV02	4822 266 30285	Terminal, 6P; Tuner/TV			
JV03	4822 265 10059	Jack, 8P			
JV04	4822 265 10062	Jack, 3P			
JV05	4822 265 10062	Jack, 3P			
J401	4822 266 30282	Terminal, 2P; Phono			
L401	4822 156 11019	Choke Coil, 320 μ H [N]			
L402	4822 156 11019	Choke Coil, 320 μ H [N]			
LV01	4822 280 20195	Relay			

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
C716	4822 121 43129	Film 15pF $\pm 10\%$ [N, E, A]	QN01	4822 130 43233	Transistor 2SC2240(GR, BL)
C717	4822 121 51036	Film 100pF $\pm 5\%$	QN02	4822 130 43233	Transistor 2SC2240(GR, BL)
C718	4822 121 51036	Film 100pF $\pm 5\%$	QN03	4822 130 42951	Transistor 2SA970(GR, BL)
C719	4822 121 51036	Film 100pF $\pm 5\%$	QN04	4822 209 83312	IC TA7317P
C720	4822 121 51036	Film 100pF $\pm 5\%$	Q701	4822 130 60526	Transistor 2SD1508
C725	4822 122 32486	Ceramic 0.01 μ F +80% -20% [N]	Q702	4822 130 60526	Transistor 2SD1508
C726	4822 122 32486	Ceramic 0.01 μ F +80% -20% [N]	Q703	4822 130 43233	Transistor 2SC2240(GR, BL)
C727	4822 122 32486	Ceramic 0.01 μ F +80% -20% [N]	Q704	4822 130 43233	Transistor 2SC2240(GR, BL)
C728	4822 122 32486	Ceramic 0.01 μ F +80% -20% [N]	Q705	4822 130 42951	Transistor 2SA970(GR, BL)
C729	4822 124 22572	Elect 100 μ F 63V	Q706	4822 130 42951	Transistor 2SA970(GR, BL)
C730	4822 124 22572	Elect 100 μ F 63V	Q707	4822 130 60525	Transistor 2SC3298(O, Y)
C781	4822 124 41533	Elect 8200 μ F 56V	Q708	4822 130 60525	Transistor 2SC3298(O, Y)
C782	4822 124 41533	Elect 8200 μ F 56V	Q709	4822 130 60524	Transistor 2SA1306(O, Y)
C783	4822 122 30043	Ceramic 0.01 μ F +80% -20%	Q710	4822 130 60524	Transistor 2SA1306(O, Y)
P701-RESISTORS			P701-MISCELLANEOUS		
RN01	4822 111 91257	1K Ω $\pm 5\%$ 1/6W	△ Q711	4822 130 60116	Transistor 2SC3280(R, O)
RN02	4822 111 91257	1K Ω $\pm 5\%$ 1/6W	△ Q712	4822 130 60116	Transistor 2SC3280(R, O)
△ RN11	4822 116 60318	22 Ω $\pm 5\%$ 1/4W, Fusible	△ Q713	4822 130 60109	Transistor 2SA1301(R, O)
△ RN17	4822 116 80654	270 Ω $\pm 5\%$ 3W, Metal	△ Q714	4822 130 60109	Transistor 2SA1301(R, O)
△ RN57	4822 116 60455	270 Ω $\pm 5\%$ 2W, Metal	Q719	4822 209 73065	IC STK3062
△ RN58	4822 116 60455	270 Ω $\pm 5\%$ 2W, Metal	JN01	4822 265 10064	Jack, 7P
R713	4822 116 53083	15K Ω $\pm 5\%$ 1/2W	J701	4822 266 30281	Terminal, Speaker
R714	4822 116 53083	15K Ω $\pm 5\%$ 1/2W	J702	4822 266 30279	Terminal, Speaker
R719	4822 100 20538	2.2K Ω , Trimming	J703	4822 265 30482	Plug, 4P
R720	4822 100 20538	2.2K Ω , Trimming	J784	4822 265 10062	Jack, 3P
R723	4822 111 91285	100 Ω $\pm 5\%$ 1/6W	LN01	4822 280 70354	Relay
R724	4822 111 91285	100 Ω $\pm 5\%$ 1/6W	LN02	4822 280 70354	Relay
R725	4822 111 91285	100 Ω $\pm 5\%$ 1/6W	LN03	4822 280 20196	Relay
R726	4822 111 91285	100 Ω $\pm 5\%$ 1/6W	L701	4822 157 51739	Coil
△ R727	4822 116 80652	1K Ω $\pm 2\%$ 1/4W, Fuse	L702	4822 157 51739	Coil
△ R728	4822 116 80652	1K Ω $\pm 2\%$ 1/4W, Fuse	P801-POWER SUPPLY CIRCUIT BOARD		
△ R733	4822 116 60317	180 Ω $\pm 5\%$ 1/4W, Fusible	P801-CAPACITORS		
△ R734	4822 116 60317	180 Ω $\pm 5\%$ 1/4W, Fusible	C801	4822 124 41538	Elect 220 μ F 35V
R735	4822 116 52348	2.2 Ω $\pm 5\%$ 1/4W	C803	4822 124 41534	Elect 10 μ F 25V
R736	4822 116 52348	2.2 Ω $\pm 5\%$ 1/4W	C804	4822 124 41538	Elect 220 μ F 35V
R737	4822 111 91424	2.2 Ω $\pm 5\%$ 1/6W	C806	4822 124 41534	Elect 10 μ F 25V
R738	4822 111 91424	2.2 Ω $\pm 5\%$ 1/6W	C807	4822 124 41534	Elect 10 μ F 25V
△ R743	4822 116 80153	0.18 Ω $\pm 10\%$ 5W	C808	4822 124 41534	Elect 10 μ F 25V
△ R744	4822 116 80153	0.18 Ω $\pm 10\%$ 5W	C809	4822 122 32486	Ceramic 0.01 μ F +80% -20%
△ R745	4822 116 80153	0.18 Ω $\pm 10\%$ 5W	C810	4822 122 32486	Ceramic 0.01 μ F +80% -20%
△ R746	4822 116 80153	0.18 Ω $\pm 10\%$ 5W	C811	4822 124 41543	[N, A, W] Elect 1 μ F 50V
△ R751	4822 116 80653	22 Ω $\pm 5\%$ 1/4W, Fusible	P801-RESISTORS		
△ R752	4822 116 80653	22 Ω $\pm 5\%$ 1/4W, Fusible	△ R801	4822 116 60309	2.2 Ω $\pm 5\%$ 1/4W, Fusible
R753	4822 111 91405	220 Ω $\pm 5\%$ 1/6W	△ R802	4822 113 90141	220 Ω $\pm 2\%$ 1/4W, Fuse
R754	4822 111 91405	220 Ω $\pm 5\%$ 1/6W	△ R804	4822 115 90166	10 Ω $\pm 2\%$ 1/4W, Fuse [N, E, W]
R755	4822 111 90726	10 Ω $\pm 5\%$ 2W	△ R805	4822 116 60309	2.2 Ω $\pm 2\%$ 1/4W, Fusible
R756	4822 111 90726	10 Ω $\pm 5\%$ 2W	△ R806	4822 115 90166	10 Ω $\pm 2\%$ 1/4W, Fuse [N, E, W]
R781	4822 116 60331	1K Ω $\pm 5\%$ 1W	△ R807	4822 116 60349	270 Ω $\pm 5\%$ 2W [E]
P701-SEMICONDUCTORS			△ R808	4822 116 60349	270 Ω $\pm 5\%$ 2W [E]
DN01	4822 130 80837	Diode HSS81	△ R809	4822 116 60246	220 Ω $\pm 5\%$ 1W [E]
DN02	4822 130 80837	Diode HSS81			
DN03	4822 130 80839	Diode S5688G			
DN04	4822 130 33305	Diode 1SS133, etc.			
DN05	4822 130 33305	Diode 1SS133, etc.			
DN06	4822 130 33305	Diode 1SS133, etc.			
△ D781	4822 130 33864	Diode 30D2FC			
△ D782	4822 130 33864	Diode 30D2FC			
△ D783	4822 130 33864	Diode 30D2FC			
△ D784	4822 130 33864	Diode 30D2FC			

REF. DESIG.	PART NO.	DESCRIPTION
▲ D801	4822 130 32508	Diode RL103E, etc.
▲ D802	4822 130 32508	Diode RL103E, etc. [N, A, W]
▲ D803	4822 130 32508	Diode RL103E, etc.
▲ D804	4822 130 32508	Diode RL103E, etc. [N, A, W]
▲ D805	4822 130 32508	Diode RL103E, etc.
▲ D806	4822 130 32508	Diode RL103E, etc. [N, A, W]
▲ D807	4822 130 32508	Diode RL103E, etc.
▲ D808	4822 130 32508	Diode RL103E, etc. [N, A, W]
▲ Q801	4822 209 80675	IC NJM78M18A
▲ Q802	4822 209 83829	IC NJM79M18A
▲ Q803	4822 209 73096	IC NJM78M05A
▲ Q804	4822 209 71041	IC NJM79M05A
P801-SEMICONDUCTORS		
J804	4822 265 10061	Jack, 5P
J805	4822 290 40296	Terminal, Earth
J806	4822 265 10062	Jack, 3P
J807	4822 265 10062	Jack, 3P
P901-POWER SWITCH CIRCUIT BOARD		
▲ C901	4822 122 33276	Ceramic Cap. 0.01 μ F $\pm 20\%$ 400V
▲ S901	4822 276 11898	Push Switch, Power

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

NOTE ON SAFETY:

Symbol ▲. Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ▲. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

9. TECHNICAL SPECIFICATIONS

Audio Section

IHF Dynamic Power

2 Ohms	180 W
4 Ohms	140 W
8 Ohms	95 W

Power Output per Channel

DIN 4 Ohms at 1 kHz	120 W
RMS 4 Ohms	90 W
DIN 8 Ohms at 1 kHz	85 W
RMS 8 Ohms	75 W

Total Harmonic Distortion at RMS 8 Ohms	0.02%
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I.M. Distortion	0.02%
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Damping Factor 8 Ohms (1 kHz)	100
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MM Cartridge Input

Frequency Response (IEC RIAA)	±0.5dB
Signal to Noise Ratio (A weighted)	86dB
Input Impedance	47kOhms
Input Capacitance	200pF
Input Sensitivity	2.5mV

CD-Tuner-Tape Input

Input Impedance	47kOhms
Input Sensitivity	150mV
Frequency Response	15Hz-70kHz
Signal To Noise Ratio (A weighted)	96dB

Output Voltage and Impedance

Tape Out [PHONO (MM) 5.0 mV 1 kHz Input]	300 mV/220 Ohms
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Channel Separation [CD Input]	>80dB
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Video Section

Input Sensitivity/Impedance	1V P-P/75 Ohms
Output Level/Impedance	1V P-P/75 Ohms
S/N Ratio	75 dB

General

Power Requirements N and T versions	220/240 V AC, 50/60 Hz
E version	110/120/220/240 V AC, 50/60 Hz

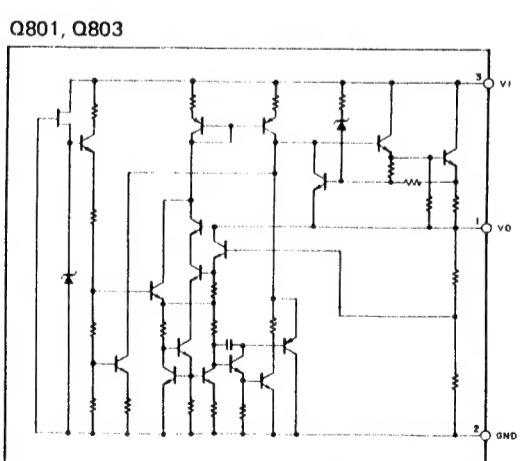
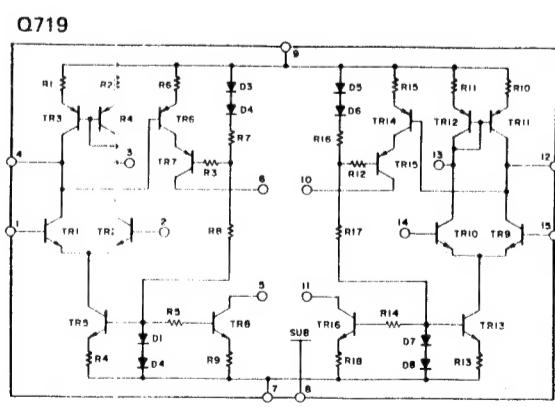
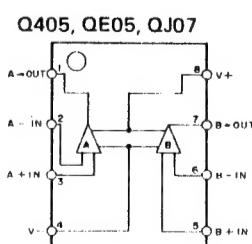
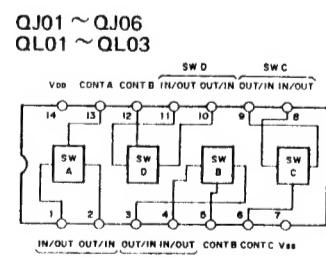
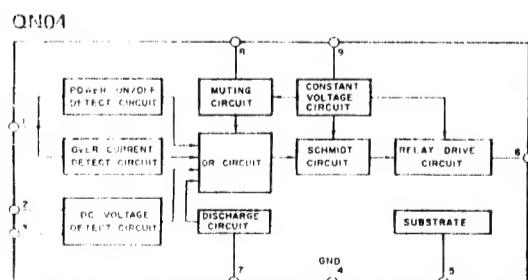
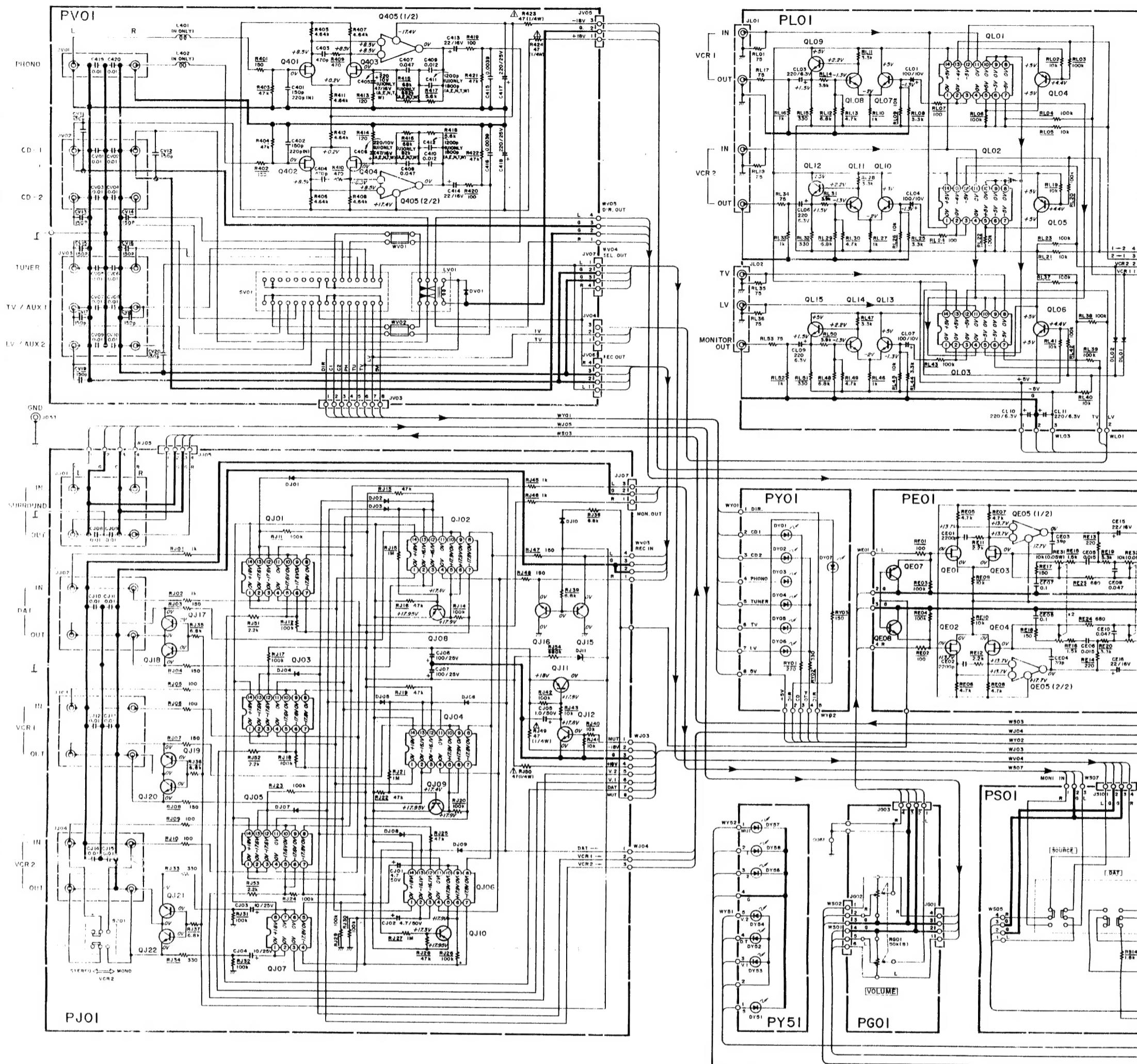
Power Consumption at Rated Output, both Channels operating	200 W
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Dimensions	
Panel Width	420 mm
Panel Height	136 mm
Depth	366 mm

Weight	
Unit alone	10 kg

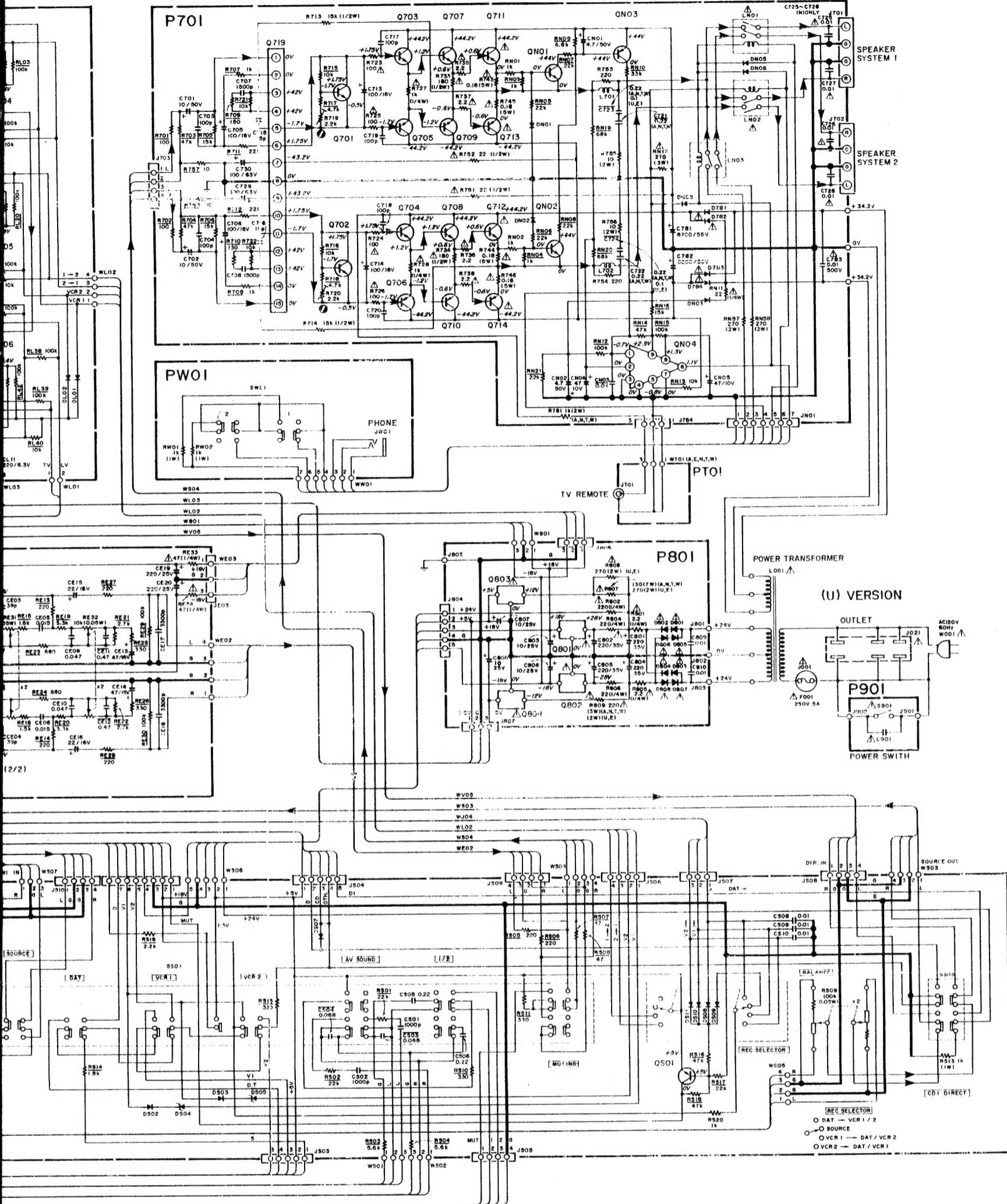
Specifications and appearance are subject to change for modification without notice.

10. SCHEMATIC DIAGRAM

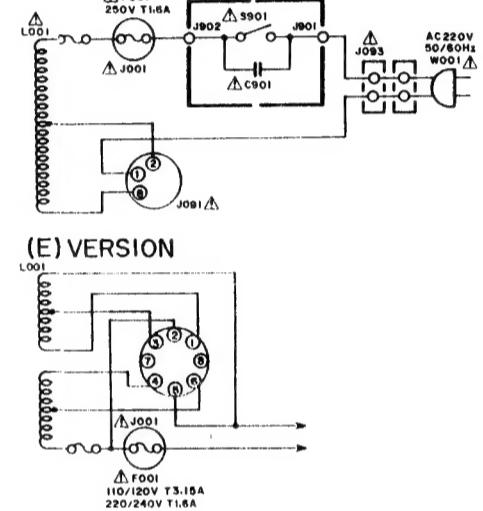


NOTE ON SAFETY:
Symbol  Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

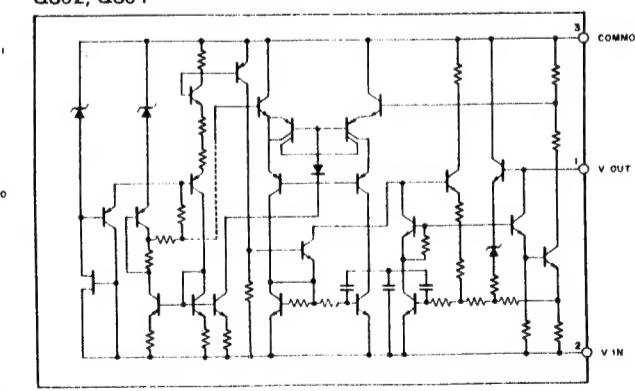
Components and wiring are subject to change for modification without notice.



(A,N,T,W) VERSION
P901 APS



Q802, Q804



"SERVICE INFORMATION IS FOR USE BY QUALIFIED PERSONNEL ONLY —
ANY MISADJUSTMENT OR MISALIGNMENT MAY BE TREATED AS A NON-WARRANTY
REPAIR BY ANY MARANTZ SERVICE CENTRE —"

Kind of Common Parts

RESISTOR

R*** (1) GD05 140, Carbon film fixed resistor, $\pm 5\%$ 1/4W
R*** (2) GD05 160, Carbon film fixed resistor, $\pm 5\%$ 1/6W

C*** : CERAMIC CAP.

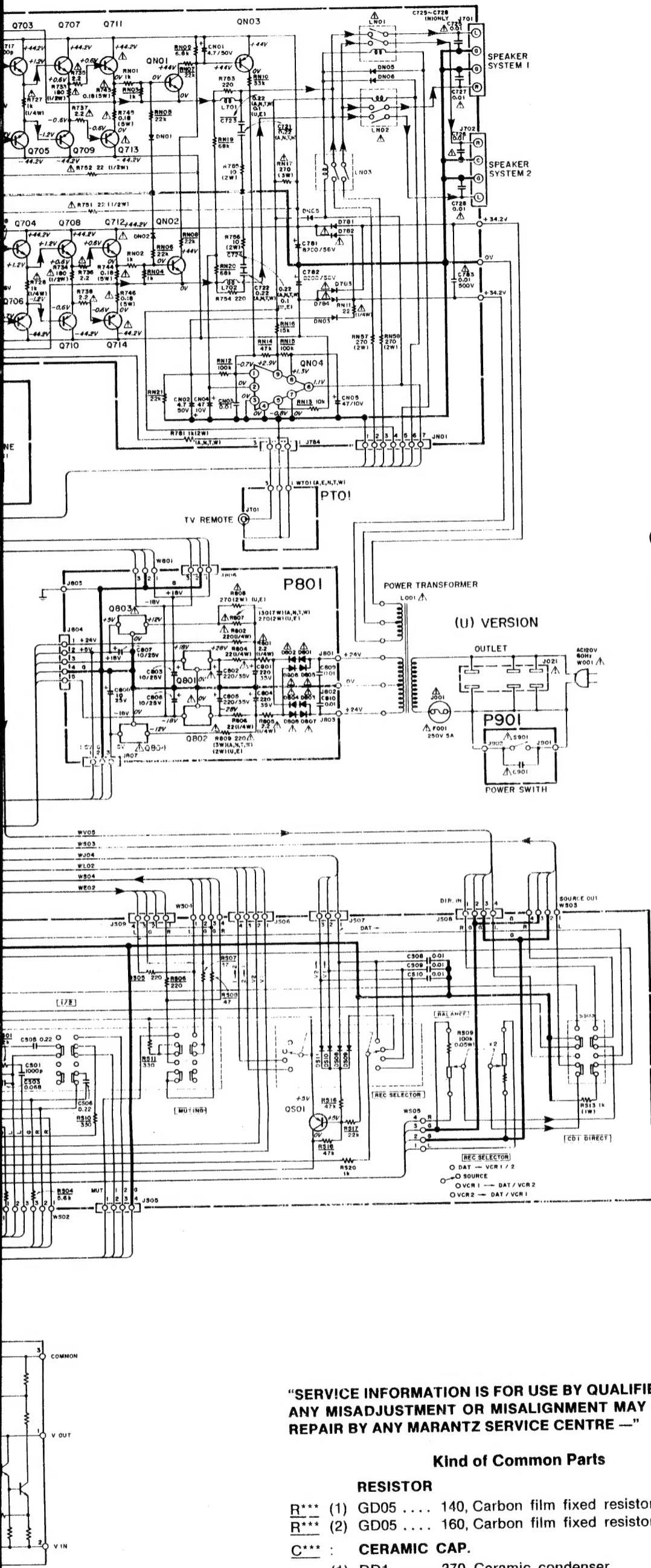
(1) DD1 370, Ceramic condenser,
disc type (titan condenser)
Temp. coeff. P350 to N1000 50V

C*** : CERAMIC CAP.

(1) DK16 300, High dielectric constant ceramic
condenser, disc type (titan variable)
Temp. chara. 2B4 50V

C*** : ELECTROLY C
(1) EA 10,
(2) DF15 350,

* In case of ordering the
parts number of 10 fig
COMMON PARTS CO



Kind of Common Parts

RESISTOR

R*** (1) GD05 140, Carbon film fixed resistor, $\pm 5\%$ 1/4W
R*** (2) GD05 160, Carbon film fixed resistor, $\pm 5\%$ 1/6W

CEMETIC CAP.

(1) DD1 370, Ceramic condenser,
disc type (titan condenser)
Temp. coeff. P350 to N1000 50V

C*** : CERAMIC CAP.

(1) DK16 300, High dielectric constant ceramic
condenser, disc type (titan variable)
Temp. chara. 2B4 50V

— SUPERPOLY-CAP (上) VELUM-CAP (下)

ELECTROLY CAP. ()/FILM CAP. ()

- (1) EA 10, Electrolytic condenser,
one-way lead type, tolerance $\pm 20\%$
- (2) DF15 350, Plastic film condenser.
one-way type, Mylar $\pm 5\%$ 50V

* In case of ordering the common parts, please establish the correct parts number of 10 figures by the procedure "ASSIGNMENT OF COMMON PARTS CODES"